Chapter 15

Supporting 21st Century Teaching and Learning with Web 2.0 Social Software Internet Platform

Shittu, Ahmed Tajudeen

Gambari, Isiaka Amosa

&

Owodunni, Ayanda Samuel

Learning Objectives

After reading through this chapter, you should be able to:

- Define what is Web 2.0 social software tools
- Discuss the theoretical underpinning of the application of (Web 2.0) social media for education
- Explain what educators can use (Web 2.0) social software tool to achieve
- Explain the benefit of (Web 2.0) social software as a medium of instruction
- Explain the strategies and Discussion policy for using Web 2.0 (Social media)
- Explain Advantages and Limitations of using (Web 2.0) social media for education

Introduction

The advancement in technology has created a paradigm shift to what constitute real and authentic knowledge in the present rapid changing world. The invention of internet has redesigned the roles, purpose, effectiveness, and scope of teaching at all levels of education, and most importantly, at the tertiary institution level. The influence of this emerging technology has necessitated the urgent need to carve a new direction, better still, use best practice to implement the educational curriculum. This is to equip the present generation of student with knowledge and the skills required to build their problem solving capacity,

Theoretical Underpinning the Application of social software tools (Facebook, wiki, and blogs) in Teaching

The theoretical underpinning the application of web 2.0 tools in teaching reside in a learning theory that is built upon the spirit of educational philosophy of constructivism. This learning theory was promoted by Piaget, Vygostsky, Bandura and Brunner and others.

Constructivism is a school of thought which sees knowledge as something to be constructed by the learners, through learning by doing. That is, learners construct information or message which they consider very useful and which make meaning to them (Gagne & Medsker, 1996; Fakomogbon, 2015). Papert (1991) analysing Piaget meaning of constructivism theory, states that *"learners are naturally active builder of their own knowledge structures and that learning will be more effective when learners are engaged using artefact that are personally meaningful to them"* (p.9)

Constructivism in education has been looked into through various philosophical and epistemological perspectives. For instance, facilitating knowledge acquisition with emerging technology has led the society into conceptualizing learning to a more active, generative process, in which traditional teacher-centred pedagogy model where the teacher is the sole transmitter of knowledge is discouraged to a learner-centred model which places emphasis on students taking responsibility of their learning. The process has changed teacher responsibility to a guide and facilitator as the students construct meaning of their learning task (Brown, Collin & Duguid, 1989; Laurillard, 2002). More importantly, any act of learning where students do not engage in cognitive task is not to be considered as constructivist in nature. Therefore, if learning is situated on socio-cultural dialogic process, then the pedagogy should provide opportunities for students to create knowledge, share the created knowledge and form community of learners (Lave & Wenger, 1991). With the technological shift that has brought a tremendous use of ICT into learning activities in the last decades, this possibility has become an impetus to the practice of constructivist pedagogical approach. Apparently, there is an increase on transforming pedagogy due to the prevalent technological rich learning environment that encourages blended teaching and learning while accommodating face-to-face and technological mediated instruction.

What can educators can use social software to achieve?

The following are what educators can use social software to achieve. Bearing in mind the changing present day learning environment, educators are no longer dispensers of knowledge but guides to how student learn. To shift and effectively perform this new role to learners, educators are required to be able to use online resources especially social software to achieve learning tasks through the following.

Initiating New Way of Learning: The teacher should use social media platform to initiate new methods of carrying out group work, sharing of work, creating a way of gathering learning resources, collaboratively developing a new learning resource, as well as developing learners' digital attendance/identity. This new way of learning is different from traditional/didactic approaches that promote individualistic learning.

Recording Group Discussion: The use of social software will enable educators to capture and record group activities in a collaboratively learning setting. For instance, Wiki can be used for collaborative authoring and recording of the discussion among group of students.

Allowing Students to take Control: Students can be allowed to take control over their learning, while the teacher is to provide support whenever the need arises.

Promoting Peer-to-Peer Learning: Social software promotes peer-to-peer learning rather than learning exclusively from the teacher. In most cases, students learn through critiquing each other's submission, contribution and presentation.

Critiquing Each Other's Work: Social media platform can be used to promote peer feedback. It can be used to facilitate discourse between students. Students can be encouraged to write comments in response to someone's remark on his or her contribution/post. This encourages reciprocal comment on students' works.

Encouraging Reflective Learning: Through social software, the teacher could ask a student to keep a blog for self-reflection. What such student post on his/her blog could be shared with his/her peers and the teacher. The student can be encouraged to support deep learning by commenting on the blog, and engaging in discussion.

Encouraging Problem Solving and Enquiry based Learning: Students can be trained to learn how to learn, by posting course related materials and linking the

students to web resources through social media platform. After this is done, the teacher can post questions on the group blog before the tutorial. In this form, posting questions on student's blog, collating teaching material, would facilitate reflective learning among the students.

Promoting Skills Development: Application of social software for teaching and learning can improve and promote student's academic skills; it can promote student literacy skills; and can also help them to become more independent learners. The use of different social software can help students to develop skills that would enable them to manage their digital and online identity.

Encouraging Team Working and Online Collaborative Skill: The use of social software will encourage team-working as it enables students to become familiar with online collaborative and communication tools.

Organizing a Virtual Class: The use of Web conference tools, such as skype, Elluminate, Virtual World, Second Life can be of help to educators in organizing virtual classes for students that are in different/remote locations and even in different time zones. Students with constraint relating to job schedule and are not able to travel for lectures could also learn through virtual classroom. Class session can be recorded and provided to students after each session for viewing and reflection.

Enhancing the usefulness of Face-to-Face Tutorials and Lecture: Educators can encourage the students to conduct pre-tutorial activities in the discussion forum or on the social bookmarking site (Delicious). The students' contribution and questions help the teacher to plan the tutorial efficiently and appropriately.

Educational Benefit of using Social Software

There are numerous benefits attributable to application of web 2.0 social media in teaching and learning process. According to Goldfaub, Pregibon, Shren, Zyko (2011), the following are some of the educational benefits of using social software in education:

Collaborative Learning: This is one of the benefits of using social software for educational related activities. Student have the opportunity to work together through reciprocal comment, sharing resources, working together on a project, helping in seeking clarification on ideas that seem cloudy and concepts that seem to be difficult for student to understand. It also enables them to share ideas and approaches on a common learning space.

Engaging Students: Social software use in teaching has been found to increase student enjoyment of lesson. It is more engaging and more interesting for students to learn through any of the social software. For instance, the use of Facebook which is the most visited site, is a platform that the students use majorly for interaction. If such site is employed for teaching, there is greater possibility that it would increase student's learning engagement and participation.

Building Awareness of Different Approaches to Learning: This is another benefit of using social software. When students look at each other's blog or contribution in a forum, it helps them to identify different means and ways to their learning. The students would be able to articulate their own contributions in better ways after looking at the resources that others share with them.

Early detection of student needs and formative assessment: The use of web 2.0 social media tool allows students to ask their instructor to clarify any ambiguity arising from what they have learnt and difficulty they encounter in the course of their class work and home work anytime, as long as they are online. On the other hand, the platform also allows teachers to provide immediate feedback, early intervention and assistance to the students on request.

Establishment of classroom community: The web 2.0 social media platform is a site that accommodates all types of learners; both gifted, average, and low level students. Those with disability, passive and active learners are provided with equal chance to participate in the learning process. The platform enables all the students to form community of learners, collaborate, interact and share ideas.

Increasing student sense of achievement: Through constant collaboration, communication and participation in web 2.0 social media platform, students would be able to learn, ask questions, and share ideas with their teachers and classmates. The collaboration forum would help students develop higher thinking skills, through sharing of information, analysing, critiquing, reflecting, arguing and negotiation.

Information Management: Most web 2.0 social media platforms are developed in a way that allows integration of video clips, photo, hyperlinks, and audio clips. With these opportunities, teachers would be able to organize the information of a specific lesson to include multimedia. This would enable learners to learn more quickly when they are exposed to different media.

Access to marginalized students: The use of web 2.0 social media would encourage and motivate students that ordinarily may not be able to learn in a

traditional classroom. Integration of web 2.0 social media platform in teaching and learning would enable learners in remote location to have equal access to education.

Strategies and Discussion policy for using Web 2.0 (Social media)
Effective use of (Web 2.0) social media would involve adherent to certain procedures. In online teaching and learning, every student is expected to fully participate in electronic discussion. Therefore, if a teacher plans to grade students on their participation in forum discussion, the teacher should clearly indicate the grading criteria for a particular discussion. It should be indicated whether grade will be based on quality as well as the number of responses; whether student are expected to respond to other student postings, and also, the deadline for posting should be clearly stated in unambiguous language.

Watterhouse and Rogers (2004) provide the following policy framework for effective use of online learning which can be adopted for (Web 2.0) social media use for teaching and learning. It is very important to set a policy of participation which will encourage students to work with each other and equally compel teachers to provide the students with appropriate feedback as necessary. Therefore, the following policy framework can work effectively in online (web 2.0) social media class.

- There should be a particular period of time in a forum when students must send in their contributions to receive credit for their participation.
- The teacher should not participate in a discussion before the discussion deadline.
- An instructor should as a matter of necessity review all students' responses and contributions within 24 hours of a discussion and respond to all students posting appropriately.
- Students should be graded based on their postings. Points should be allocated to students based on the worth of their responses and how they comply with the required number of posting as indicated in the instruction.
- The instruction should also include the number of points that a student can earn for participating in a specific discussion.
- The score of the students on each given discussion should be posted on the online grade book on or before one week after the end of the discussion

- Students should not be allowed to deviate from the topic of the discussion. Any student who introduces an irrelevant issue or topic contrary to the subject of discussion should be penalize and asked to leave the discussion

- Every student should be given equal right to express his opinion on the subject of discussion. At the same time, the right should be respected and such right should not be abused through posting of impolite comments. A student that fails to abide by this rule should be asked to withdraw from the forum or discussion and a grade of zero should be allocated to such student.

- Any student that posts abusive and insulting message should be required to leave the class. A grade of (F) for the course will be recorded for such student.

- The behaviour of students should be controlled on the discussion forum. A student should not be allowed to dominate through excessive posting, or changing the topic of discussion out rightly. Any student that violates this rule should be asked to leave the discussion and such student should earn a grade of zero.

- Any student that chooses to withdraw from discussion should be informed of the consequence of such action in a private email

Advantages of web 2.0 (Social media) in education

There are several advantages that can be derived from utilization of web 2.0 social media as a teaching and learning platform. Some of the advantages are as follows:

- Web 2.0 social media platform can be used to increase students' collaboration. The site provides an opportunities for students to easily contact one another whenever the need arises, most especially, when they encounter challenges on school projects and assignments. They can reach out to their classmates for assistance to overcome their challenges regardless of their distance from one another. Another advantage of web 2.0 social media is that it encourages student participation in the learning process. This opportunity is available to all students, whether active or passive. More especially, some students who may feel shy to express themselves verbally in a face-to-face conversation could express their thoughts freely through social media platform without any hindrance.

- Another important advantage of using web 2.0 social media for teaching and learning is that it enables quick sharing of resources among students. Through the platform, an instructor can upload course materials, be it

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print, images, audio file and video clips can be posted online for students to access. A link can also be created on the platform to other internet resources for students to access in their course of study.

- Web 2.0 social media also helps the teacher, students, and parents to be on this page in terms of information on what is happening in the school. Teachers can interact with parent when the need arises to inform them of their children's performance and keep the parents abreast about other school activities.

- Despite the advantages that can be derived from utilization of web 2.0 social media, there are some disadvantages in its use. Parts of the disadvantages are: the platform can cause distraction to students in the course of learning. For instance, students can easily use the medium for unproductive activities especially when using the platform in the classroom as a support resource for teaching. Also, use of web 2.0 social media in the classroom can be counter-productive if it is not properly use for teaching and learning. Most especially if the instructor fails to provide the policy framework for effective use of the platform. Another shortcoming of web 2.0 social media is the issue of cyber bullying and posting of hurtful messages among students. If not properly controlled, it could lead to the defeat of the teaching and learning goal. Added to this is the issue of student posting of inappropriate content on the platform. Some unguided students can resort to creating a link to obnoxious content such as pornographic sites and the like.

Conclusion

This chapter presents how web 2.0 social media could be deployed for teaching and learning, to make learning process to be more meaningful, engaging, gratifying and more student centred. In doing this, the introductory part of the chapter provides a definition of web 2.0 social media. It further explains the benefit that can be derived in using social media platform for educational activities as well as the theoretical concept underpinning the use of social media as an appropriate medium of teaching the present digital native students. The strategies on effective use of web 2.0 social media were also discussed. Lastly, the advantages and shortcomings of using the platform was addressed.

Exercises

1. Define the terms web 2.0 social media

2. List and explain the benefits of using web 2.0 social media

3. Discuss the theoretical concept underpinning the use of web 2.0 social media

4. Explain the policy for effective use of social media as a learning platform

5. What are the advantages and limitations of web 2.0 social media as a medium for educational related activities?

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